Digging in the Sun

by Michael Ellis

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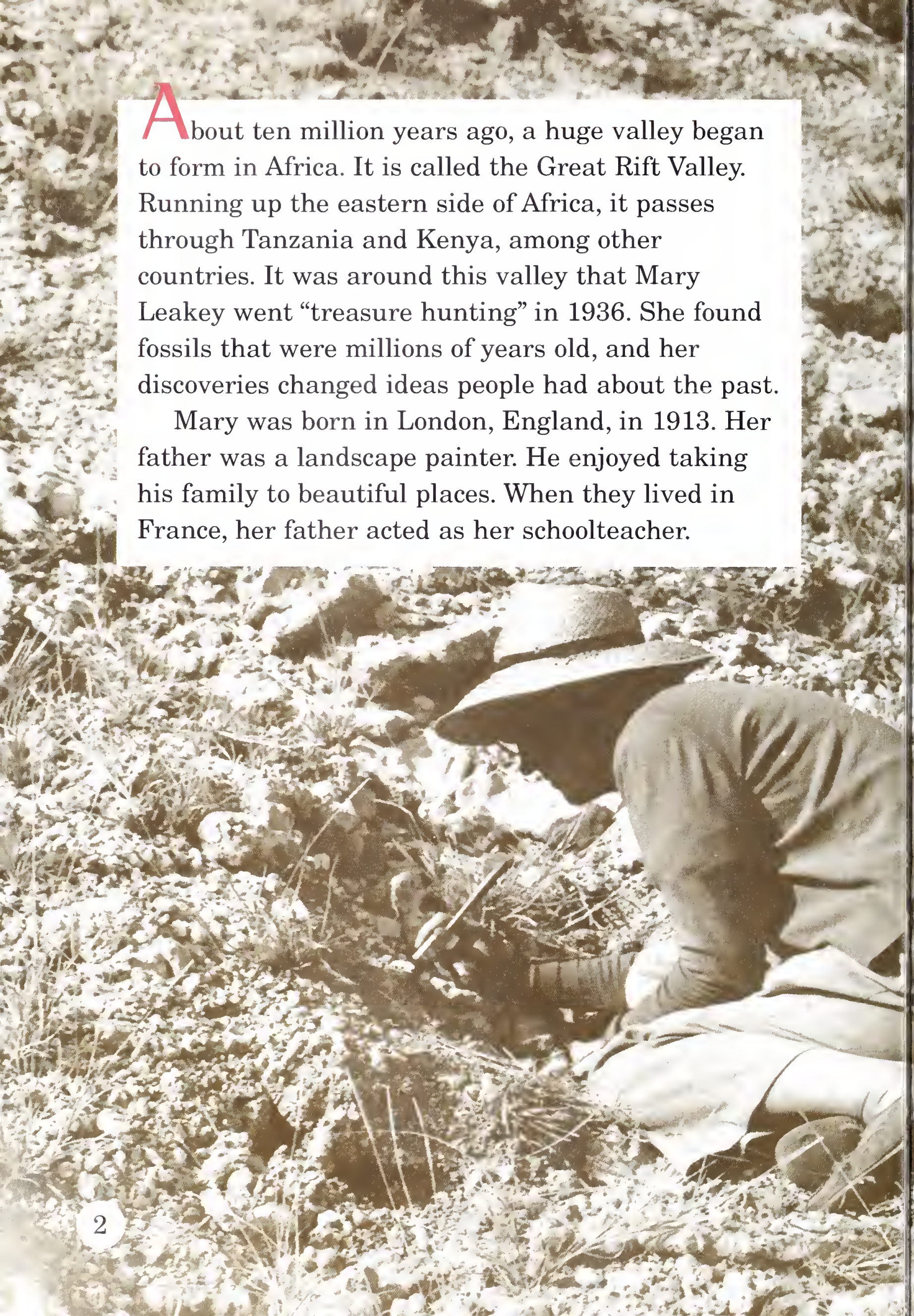
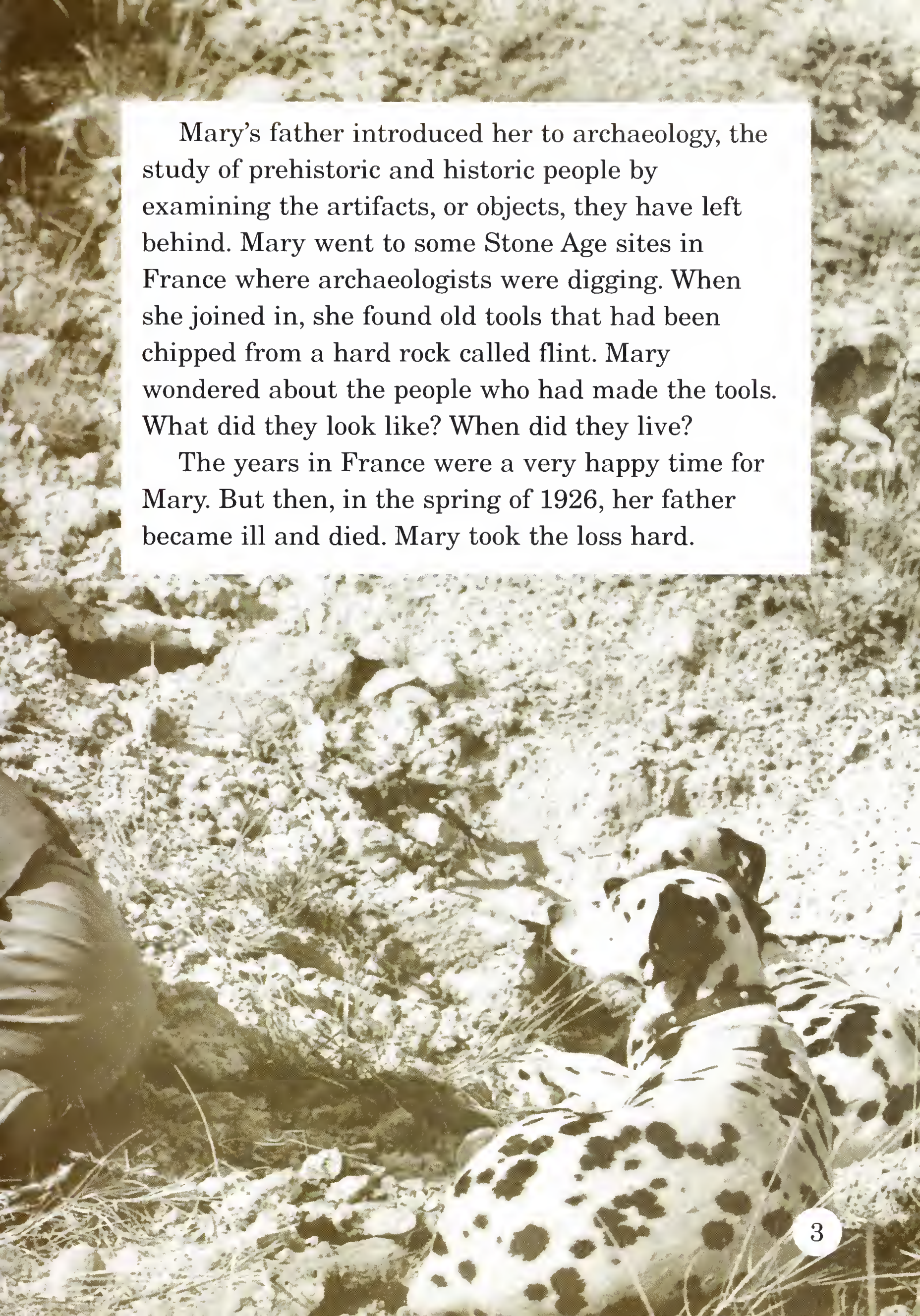
About ten million years ago, a huge valley began to form in Africa. It is called the Great Rift Valley. Running up the eastern side of Africa, it passes through Tanzania and Kenya, among other countries. It was around this valley that Mary Leakey went "treasure hunting" in 1936. She found fossils that were millions of years old, and her discoveries changed ideas people had about the past.

Mary was born in London, England, in 1913. Her father was a landscape painter. He enjoyed taking his family to beautiful places. When they lived in France, her father acted as her schoolteacher.



Mary's father introduced her to archaeology, the study of prehistoric and historic people by examining the artifacts, or objects, they have left behind. Mary went to some Stone Age sites in France where archaeologists were digging. When she joined in, she found old tools that had been chipped from a hard rock called flint. Mary wondered about the people who had made the tools. What did they look like? When did they live?

The years in France were a very happy time for Mary. But then, in the spring of 1926, her father became ill and died. Mary took the loss hard.



With heavy hearts, Mary and her mother went back to England. To make matters worse, Mary now had to go to school. She did not enjoy it—and the teachers did not enjoy her! Her school days were over after she was expelled from her second school for causing an explosion in chemistry class.

But Mary still liked history. Her uncle took her to see Stonehenge, a prehistoric monument in southern England, and they went to an archaeological site nearby. The person in charge was Dorothy Liddell. As Mary watched her work, she thought that being an archaeologist was a job she could do.

Mary decided to become an archaeologist. She went to lectures and worked at several different archaeological sites around England.

In 1932, Mary made a series of drawings of prehistoric flint tools. The drawings led to a job illustrating the book, *Adam's Ancestors*. The author of the book was the archaeologist Louis Leakey.

Louis was well known. His parents were English missionaries, and he had been born in Kenya. He had been a brilliant student at Cambridge University and had made archaeological trips to East Africa.

A young Mary Leakey with her pet monkey, Simon.

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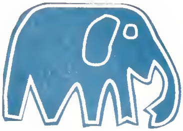
Mary and Louis liked each other from the start. They had both had unusual childhoods and did not quite fit in. And they were both driven to learn all they could about the history of the human race. Before long, Mary and Louis were married.

In his earlier expeditions, Louis had found several promising places for fossil hunting. So, in 1936, Mary and Louis went to East Africa to search for the past.

The field that Mary was entering is a branch of archaeology concerned with the beginnings of the human race. Louis was one of the few people who believed that humans had started in Africa. The first time Mary set foot in Africa, she fell in love with it. She would live there, in Kenya and Tanzania, for the rest of her life.



One of the sites the Leakeys planned to explore was Olduvai (OHL duh vī) Gorge in Tanzania. At Olduvai, they quickly got to work. Mary soon found two small pieces of a very old skull.

Working at archaeological sites is not easy. When fossils are uncovered, removing them from the rock is a slow, delicate job. Mary Leakey would spend many years working under the hot African sun in places without electricity or water.

Money was a big problem for the Leakeys. So when Louis was asked to write a book in Kenya, they moved there. While Louis did research and wrote, Mary explored an area called Hyrax Hill.

At Hyrax Hill, Mary found the remains of ancient settlements and published a report of her findings. From then on, Mary was accepted as an archaeologist.

An important site the Leakeys worked at over the next few years was near Mount Olorgesailie (ahl or ges Ī lee e), also in Kenya. A geologist's report from 1919 had described a spot where stone tools simply lay on the ground. But there was no map with the report! Mary and Louis tried to find the place several times. At last, in 1942, they found it.

The Leakeys digging at Olduvai Gorge.

On a slope that had been worn away over thousands of years by the weather was a huge collection of stone tools. Years later, tests showed that the tools were about 400,000 years old.

Mary spent several months surveying the site and uncovered many valuable tools and fossils. The Kenyan government agreed with Mary and Louis that Olorgesailie should become an open-air museum. A catwalk—a walkway on stilts—was built so that the artifacts could be seen, but not disturbed.

Mary now had two small children, but that did not slow her down. In 1948, she went with Louis to Rusinga Island in Lake Victoria. There, Louis discovered the fossilized bones of an extinct form of crocodile. Mary, exploring nearby, found a tooth sticking out of the ground. As she brushed the earth from the tooth, she saw there was a nearly complete skull!

It took several days to get the pieces safely from the ground, and Mary spent about a month putting them together. The skull turned out to be about 18 million years old. Many archaeologists believe that *Proconsul* (proh KAHN suhl), as the species, or group, is named, is an early ancestor of humans.

This discovery gave the Leakeys some fame and some money. It allowed them to return to Olduvai and continue working there. In 1959, Mary again found a nearly complete skull from an unknown species.

The Leakeys named the species *Zinjanthropus bosei* (zihn JAHN thruh puhs BOH zī), which means East African Man. But it turned out to be from a different family. Still, archaeologists think that "Zinj" and humans both have the same ancestor.

Zinj attracted attention around the world. When Mary found the skull, a camera crew happened to be at Olduvai for a television program about the Leakeys. Zinj was the first skull of its age—about 1.8 million years old—found in Africa. Television viewers felt the excitement of the archaeologists as they watched the skull being dug up. Few people knew that the 400 or so pieces of the skull would take Mary more than a year to piece together.

Zinj made the Leakeys famous, and it brought them money from the National Geographic Society. Within a year, they found another new species.

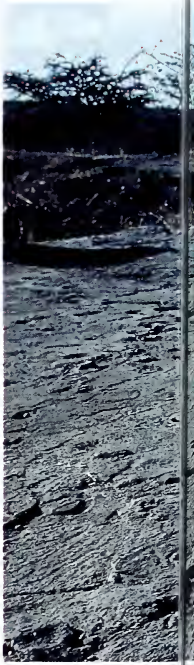
The bones the Leakeys found included some from the hands and feet. The hand bones showed that this species could have made tools. The foot bones proved it walked upright. The skull bones showed that this species had a larger brain than Zinj. Scientists found it had the part of the brain that controls speech in humans. Louis and Mary were sure that *Homo habilis*, as they named it, was the first to belong to the same group as modern humans. It took another ten years for most other scientists to accept that the Leakeys were correct.

In 1972, Louis died. His work had made him famous. But it had always been backed up by the careful scientific evidence that Mary had provided.

On her own, Mary continued working. Another site she wanted to explore was a place called Laetoli (LĪ uh tahl ee). For nearly two years, she prepared the area for excavation.

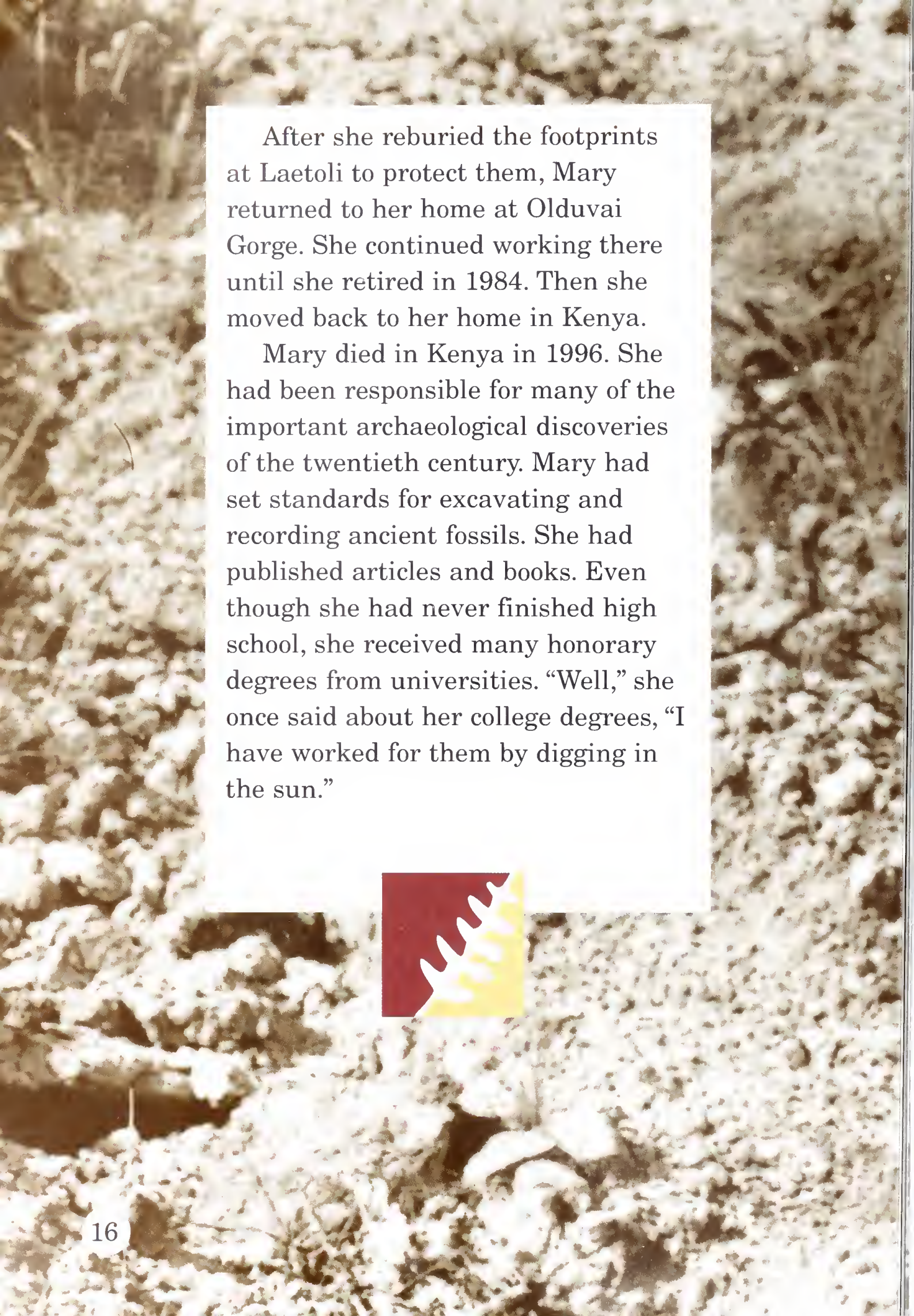
At first, Mary found no artifacts at Laetoli. But then she had a strange stroke of luck. Even scientists can get silly, and two visiting archaeologists were throwing dried elephant dung at each other when one tripped and fell. On the ground in front of his face were several footprints. They included the tracks of a now extinct rhinoceros.

Mary wondered how fossilized footprints could have survived. She finally figured it out. Millions of years ago, the nearby volcano, Mount Sadiman, erupted quite often, throwing ash into the sky. When the ash fell, it covered the ground. Animals crossing the area left tracks in the ash. When it rained, the ash got wet. As it dried, it hardened like cement.



Mary Leakey measuring footprints at Laetoli.

Mary and her team were excited about the tracks, but they had another surprise. Looking for more tracks, they found some human-looking footprints. The footprints had been left more than 3.5 million years ago! There were two sets, running side by side. The Laetoli footprints were among the earliest evidence ever found of members of the family that includes humans.



After she reburied the footprints at Laetoli to protect them, Mary returned to her home at Olduvai Gorge. She continued working there until she retired in 1984. Then she moved back to her home in Kenya.

Mary died in Kenya in 1996. She had been responsible for many of the important archaeological discoveries of the twentieth century. Mary had set standards for excavating and recording ancient fossils. She had published articles and books. Even though she had never finished high school, she received many honorary degrees from universities. “Well,” she once said about her college degrees, “I have worked for them by digging in the sun.”

FOR SCHOOL AND HOME

Activities
for School and Home

Identify Mary's Discoveries On an atlas map, identify the sites of Mary Leakey's discoveries. Write the name of each site on an index card. Then, on the back of each card, write the name and date of the discovery that was made there. For example, on the back of the Lake Victoria card, write "Proconsul, 1948." Share the cards with classmates and see if they can locate each discovery site on the map.

Write for a Newspaper Choose one of Mary Leakey's discoveries. Then work with family members to write the headline and first paragraph of a newspaper article about it. Include as many as you can of the five *W*'s of writing: *Who, What, When, Where,* and *Why*.

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